

REMARKS / ARGUMENTS

Examiner Klimowicz is thanked for the thorough examination of the subject Patent Application. The claims have been carefully reviewed and amended, and are considered to be in condition for allowance.

This structure and method for minimizing EME (Electromagnetic Emission) and the crosstalk between the signal lines which are used to write and read the tracks of magnetic disk drives. These signal lines are located on magnetic trace suspension assemblies which move above the magnetic disk drives. The structure and method utilize well-placed single and multiple crossovers on either or both of the lines used to read and write the tracks on magnetic disks. In addition, the structure and method utilize the parasitic capacitances between the write and read lines to couple beneficial voltages which cancel the unwanted crosstalk noise.

Reconsideration of the rejection of claims 1-6 and 19-24, under 35 U.S.C. 102(b) as being anticipated by Carpenter et al. (WO 98/20485 A1), is requested based on the following.

On page 4 of the December 5, 2006 office action, the examiner indicated that he disagreed with our previous October 16, 2006 response based on the claims as presently

drafted. As a result, independent claims 1 and 19 have been amended to include the limitation of dependent claims 2 and 20 respectively. The amended claim 1 is shown below.

A crosstalk and EME (electromagnetic emission) minimizing trace suspension assembly structure comprising:
 multiple write lines which are crossed between a preamplifier connection point and slider contact pads;
 multiple read lines driven by pre-amplifier circuits;
 slider contact pads, which connect said write lines to said trace suspension assembly;
 slider contact pads, which connect said read lines to said trace suspension assembly; and
 multiple write line driven by preamplifier circuits,
 wherein said multiple write lines which are crossed between said preamplifier connection point and said slider contact pads are used to cancel out time-delayed (transmission line effects) parts of said crosstalk and said EME,
 wherein a crossing point of said write lines between said preamplifier connection point and said slider contact pads is placed halfway between said preamplifier connection point and said slider contact pads.

The new claim 1 limitation explicitly states the unique aspect of the instant application over Carpenter and other prior art. The use of a single crossing point halfway along the write lines allows the a positive crosstalk voltage and a negative crosstalk voltage to cancel each other out to zero, as described by the following equation which is from page 11 of the instant application.

$$VR_+ - VR_- = j\omega(W_+ZR^*E1 - W_+ZR^*E2 + W_-ZR^*E3 - W_-ZR^*E4) \\ - j\omega(W_-ZR^*D1 - W_-ZR^*D2 + W_+ZR^*D3 - W_+ZR^*D4)$$

The only way to make $VR_+ - VR_-$ equal zero is to have $W_+ = -W_-$, which is equivalent to placing the crossing at the halfway point of the write lines. This halfway crossing point of the write lines is not merely a newly discovered function of the prior art. It is a novel use of a single, halfway crossing of the write lines. It is not valid to claim that Carpenter had many twisted wires and one of the wires may have crossed the write line at the halfway point by chance, and that this possible halfway crossing invalidates the specific claims of the instant application.

Dependent claims 2 and 20 which have been combined with independent claims 1 and 19 are now canceled. Dependent claims 3-6 and 21-24 which depend on independent claims 1 and 19 respectively should now be allowed.

The examiner is thanked for the thorough review of this patent application. The changes to the specification do not introduce any new matter.

It is requested that should there be any problems with this Amendment, please call the undersigned Attorney at (845) 452-5863.

Respectfully submitted,



Stephen B. Ackerman, Reg. No. 37,761